

IN THE CLAIMS

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This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously Presented) A field-effect transistor, comprising:

a ferromagnetic layer, having a film thickness of 50 nm or less, which is made of a Ba-Mn oxide showing ferromagnetism at 0°C or higher;

a dielectric layer made of a dielectric material or a ferroelectric material, said ferromagnetic layer and said dielectric layer being bonded to each other, wherein

the field-effect transistor has a bottom-gate structure.

2. (Original) The field-effect transistor as set forth in claim 1, wherein the ferromagnetic layer is made of a Ba-Mn oxide whose composition is represented by $(La_{1-x}Ba_x) MnO_3$ where x satisfies $0.05 < x < 0.3$.

3. (Original) The field-effect transistor as set forth in claim 1, wherein the ferromagnetic layer is made of a Ba-Mn oxide whose composition is represented by $(La_{1-x}Ba_x) MnO_3$ where x satisfies $0.10 < x < 0.3$.

4. (Currently Amended) The field-effect transistor as set forth in claim 1, ~~2, or 3~~, wherein the dielectric material or the ferroelectric material is BaTiO_3 , SrTiO_3 , $(\text{Ba}_{1-y}\text{Sr}_y)\text{TiO}_3$, PbTiO_3 , $\text{Pb}(\text{Zr}_{1-z}\text{Ti}_z)\text{TiO}_3$, or Al_2O_3 , where y satisfies $0 < y < 1$ and z satisfies $0 < z < 1$.

5. (Currently Amended) The field-effect transistor as set forth in claim 1, ~~2, or 3~~, wherein the dielectric material or the ferroelectric material is BaTiO_3 , SrTiO_3 , $(\text{Ba}_{1-y}\text{Sr}_y)\text{TiO}_3$, PbTiO_3 , or Al_2O_3 , where y satisfies $0 < y < 1$.

6. (Cancelled)

7. (New) The field-effect transistor as set forth in claim 2, wherein the dielectric material or the ferroelectric material is BaTiO_3 , SrTiO_3 , $(\text{Ba}_{1-y}\text{Sr}_y)\text{TiO}_3$, PbTiO_3 , $\text{Pb}(\text{Zr}_{1-z}\text{Ti}_z)\text{TiO}_3$, or Al_2O_3 , where y satisfies $0 < y < 1$ and z satisfies $0 < z < 1$.

8. (New) The field-effect transistor as set forth in claim 2, wherein the dielectric material or the ferroelectric material is BaTiO_3 , SrTiO_3 , $(\text{Ba}_{1-y}\text{Sr}_y)\text{TiO}_3$, PbTiO_3 , or Al_2O_3 , where y satisfies $0 < y < 1$.

9. (New) The field-effect transistor as set forth in claim 3, wherein the dielectric material or the ferroelectric material is

BaTiO₃, SrTiO₃, (Ba_{1-y}Sr_y) TiO₃, PbTiO₃, Pb (Zr_{1-z}Ti_z) TiO₃, or Al₂O₃, where y satisfies 0<y<1 and z satisfies 0<z<1.

10. (New) The field-effect transistor as set forth in claim 3, wherein the dielectric material or the ferroelectric material is BaTiO₃, SrTiO₃, (Ba_{1-y}Sr_y) TiO₃, PbTiO₃, or Al₂O₃, where y satisfies 0<y<1.